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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,623	12/19/2000	Karl E. Uth	860-20-009	6531

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EXAMINER

PATEL, VISHAL A

ART UNIT

PAPER NUMBER

3626

DATE MAILED: 01/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,623

Applicant(s)

UTH, KARL E.

Examiner

Vishal Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "a sealing means", this is improper since this means lacks function. Applicant should change this language for example delete "a sealing means comprising" and add on line 3 before "comprising" --the shaft sealing assembly--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sieghartner (US. 5,238,253) and Orlowski (US. 5,951,020).

Sieghartner discloses a shaft sealing assembly with a pumping device *for sealing a fluid at a space between a housing and a rotatable shaft*, comprising:

a sealing means comprising;

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a seal ring unit (one of 26 and 28), coaxially surrounding the shaft within the housing and arranged for movement axially relative to the shaft under a resilient pressure (pressure by spring between 31 and 32);

a counter ring unit (one of 27 and 29), coaxially surrounding the shaft within the housing and preventing from axial movement relative to the shaft when in operating position;

each of the ring units having an end face (end face of the rings unit) for mutual engagement under the resilient pressure to form a seal, one of the ring units being mounted for rotation with the shaft at least one of the end faces having a surface profile (the surface profile is flat) to act on a sealed fluid between the end faces (fluid between the end faces, column 4, lines 29-35);

a pumping means (42, 43 and 45), positioned concentrically with the shaft and within the housing and positioned between the space and the sealing means for a liquid portion of the fluid;

a port near (18) the sealing means, the port connected to communicate with an external gas source (column 1, lines 25-26).

Sieghartner fails to disclose the pumping means for vaporizing. Orlowski discloses a pumping means for vaporizing of fluid (column 1, lines 55-64). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pumping means of Sieghartner for vaporizing of fluid as taught by Orlowski, to evacuate all contaminants from the sealing assembly and the environment.

5. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sieghartner and Orlowski as applied to claim 1 above, and further in view of Sedy (U.S. 4,212,475).

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Sieghartner and Orlowski disclose the invention substantially as claimed above but fail to disclose the surface profile on one of the end faces is a plurality of helical grooves. Sedy discloses an end face of a seal ring unit to have a surface profile with plurality of helical grooves (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the surface profile of Sieghartner to have plurality of helical grooves as taught by Sedy, to provide a gap which permits controlled leakage for lubrication and cooling (column 1, lines 64-67 and column 2, lines 63-65).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sieghartner and Orlowski as applied to claim 1 above, and further in view of Loret (U.S. 4,621,981).

Sieghartner and Orlowski disclose the invention substantially as claimed above but fail to disclose a one-way valve, the valve preventing outflow of the sealed fluid. Loret discloses a one-way valve at an inlet port, the valve preventing outflow of the sealed fluid (valve 40, figures 6, 3 and 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the inlet port of Sieghartner to have a one-way valve as taught by Loret, to prevent outflow of fluid (column 4, lines 55-69 of Loret).

Allowable Subject Matter

7. Claims 2-4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ludwig, Ball, Van Herpt and Sweeney.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 703-308-8495. The examiner can normally be reached on 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-308-3687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

VP
January 7, 2002


Anthony Knight
Supervisory Patent Examiner
Group 3600